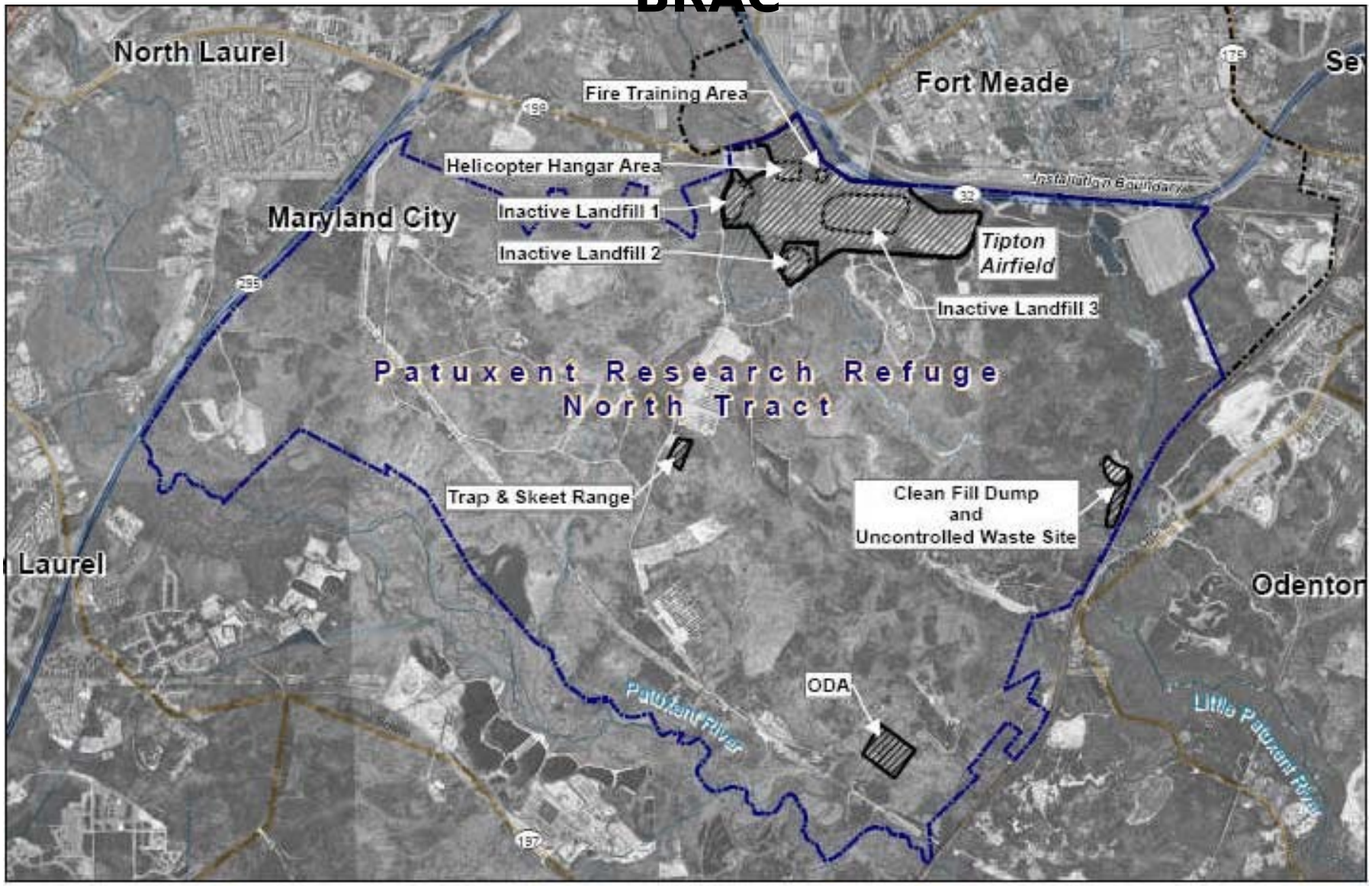
RAB Update

Trap and Skeet Range 17 Remedial Investigation Activities

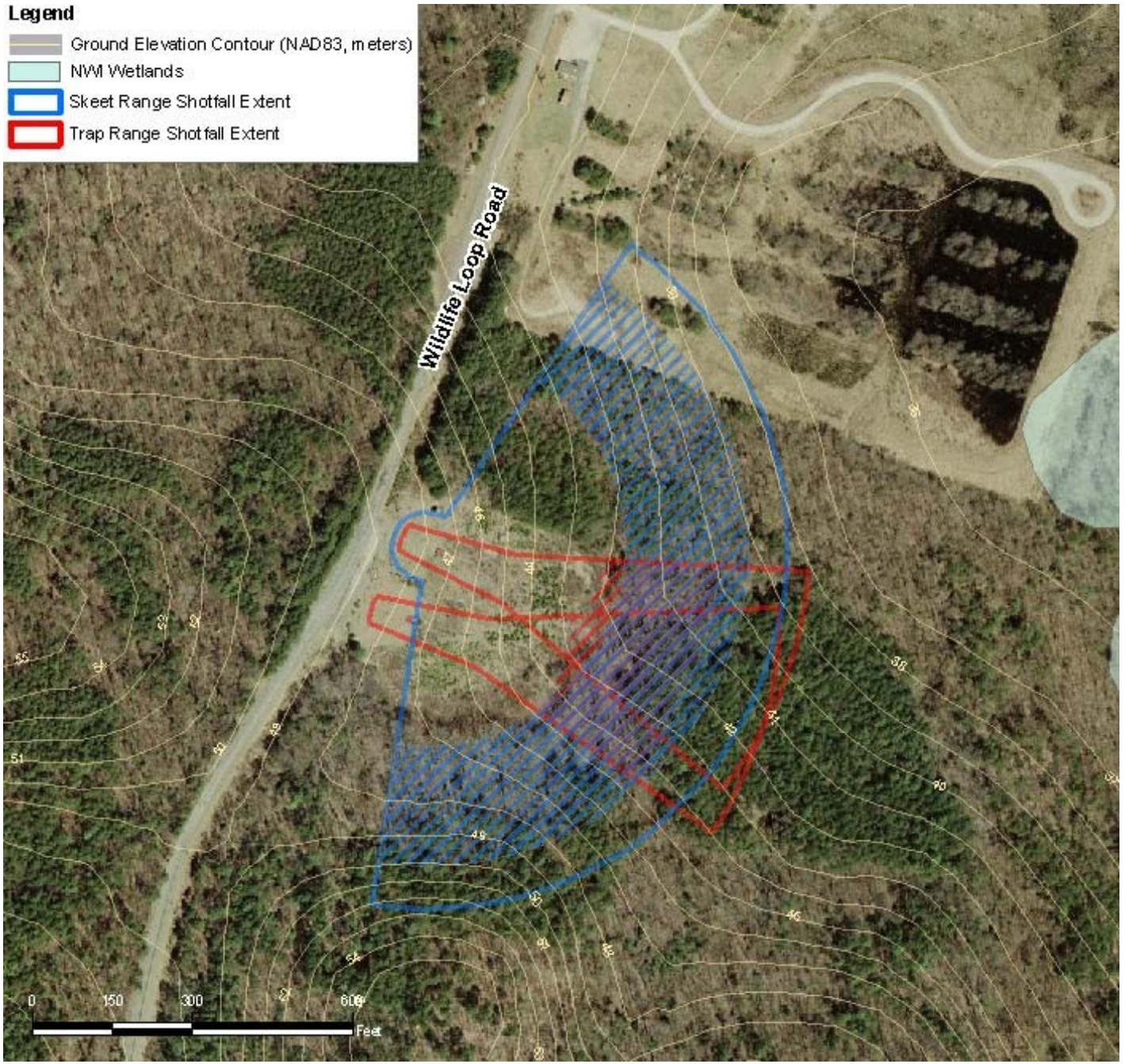
25 March 2010

Environmental Restoration Properties - BRAC



Trap and Skeet Range 17

Trap and Skeet Range 17



Lead Shot Fall Range

Former Trap and Skeet Range 17 (FGGM-94)

- **Background**
  - Part of 8,398 acres transferred to DOI - operations ended in late 1990's
  - 2004 ecological risk assessment (ERA) prepared by FWS/EPA

- **Status**
  - 2004 ERA data gaps exist - Pb shot, As, groundwater
  - RI in place, FS, PP and ROD pending
  - Remedial Action – TBD based upon ecological and human health risk assessment

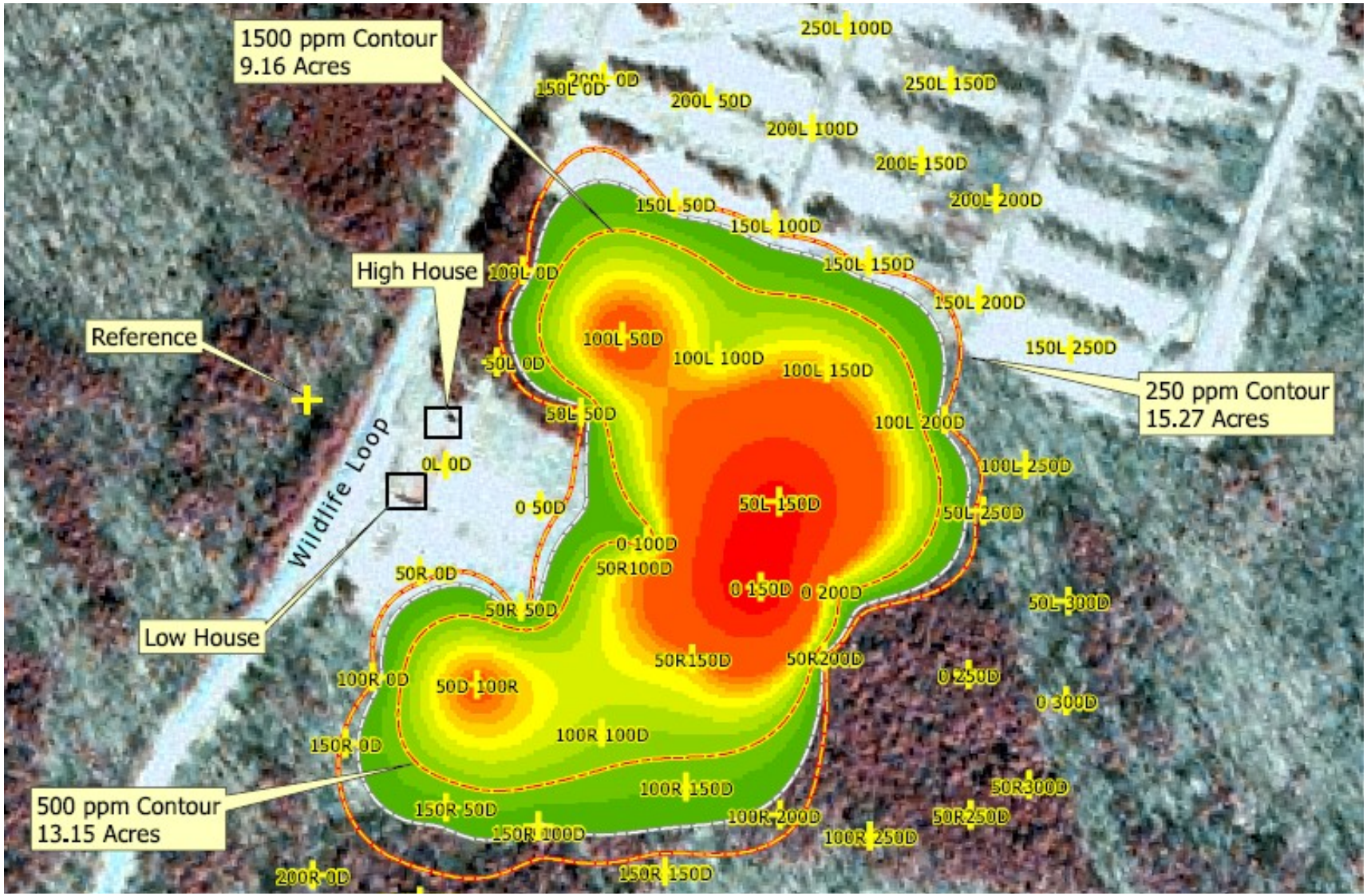
- **Milestones**
  - Remedy in-place: FY11 (estimated)
  - Response complete: FY11 (estimated)

Table 2-2: Summary of Soil Results for Antimony, Arsenic, Copper, and Lead

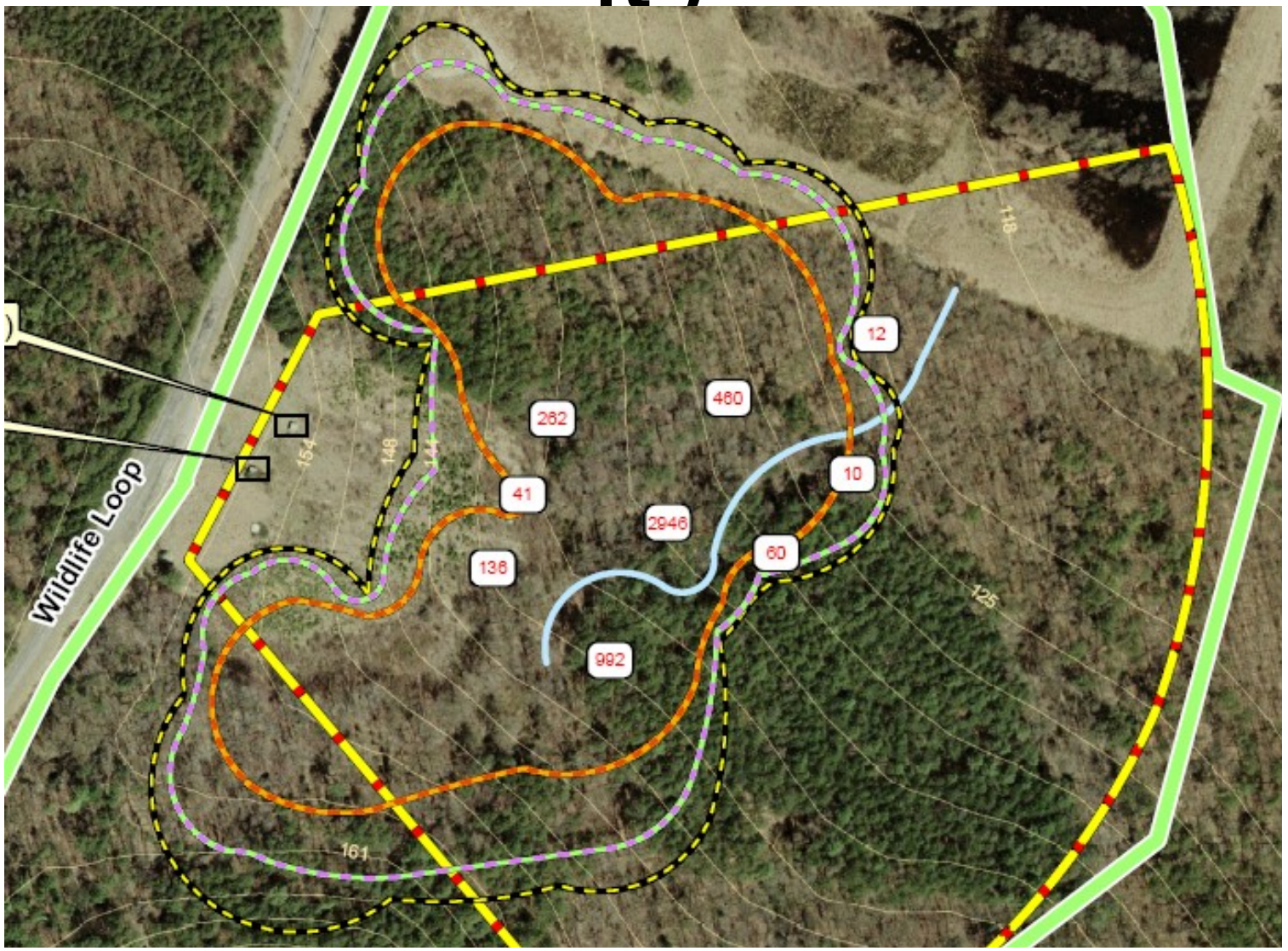
Metal	Detections	Non-Detections	Number of Samples (a)	Concentration (c) (mg/kg)		
				Maximum Detected	Minimum Detected	Reference
XRF						
Antimony	1	73	74	160	160	- -
Arsenic	6	68	74	180	33	- -
Copper	7	67	74	120	88	- -
Lead	59	15	74	22,000	39	- -
ICAP						
Antimony	5	5	10	190	1.3	- -
Arsenic	10	0	10	130	1.9	- -
Copper	10	0	10	51	3.6	- -
Lead	10	0	10	18,000	19	- -
TAL						
Antimony	3	2	5	340	0.97	U
Arsenic	5	0	5	220	2.1	3
Copper	5	0	5	25	3.4	9.2
Lead	5	0	5	44,000	260	46
Lead Shot Count (b)						
Lead	9	0	9	2,946	10	0

Source: USFWS/EPA, 2004
(a) Excluding the reference sample.
(b) Per square foot
(c) Detection and reporting limits are not well-defined by USFWS/EPA. 2004.

2004 Soil Lead XRF Results (mg/kg)



2004 Lead Shot (pellets / ft²)



Former Trap and Skeet Range 17 Remedial Investigation

- **Why Conduct An RI?** – Required under CERCLA/NCP. Part of the Fort Meade Environmental Restoration Program. Simply put, it's the right thing to do….because metals (primarily lead and arsenic have been released into the environment at elevated concentrations.
- **RI Objective** – Further characterize the site with regard to the occurrence and distribution of soil and groundwater contamination and assess the associated ecological and human health risks posed by this contamination.
- **Purpose** - Identify and estimate the costs for implementing potential remedial actions to adequately control the risks (Feasibility Study).

Former Trap and Skeet Range 17
RI TASKS

- **Task 1—Project Planning/Scoping -** Work Plan represents the bulk of Task 1. Includes soliciting stakeholder comments and comment resolution, revision/finalization. Final WP was submitted Oct 2009.

- **Task 2—Community Relations -** Through the RAB, the community will remain engaged in this RI (and FS process).

- **Task 3—Field Investigation -** Collecting and analyzing soil and groundwater samples as described in the SAP. Conducted Nov 09 – Mar 2010.

Former Trap and Skeet Range 17
RI TASKS (cont)

- **Task 4—Data Evaluation –** Previous and new site data will be integrated and evaluated to update the understanding of the occurrence and distribution of soil and GW COPCs. Includes comparing the analytical results to appropriate screening levels and preparing contour maps to illustrate contaminant distribution.

- **Task 6—Assessment of Risks -** Existing and pending site assessment data will be used to assess potential current and future human health and ecological threats.

- **Task 7—Remedial Investigation Report**
  - Draft Final (Stakeholder Review) 01 May 2010 (est)
    - Final -01 August 2010 (est)

Preliminary Results - Soil

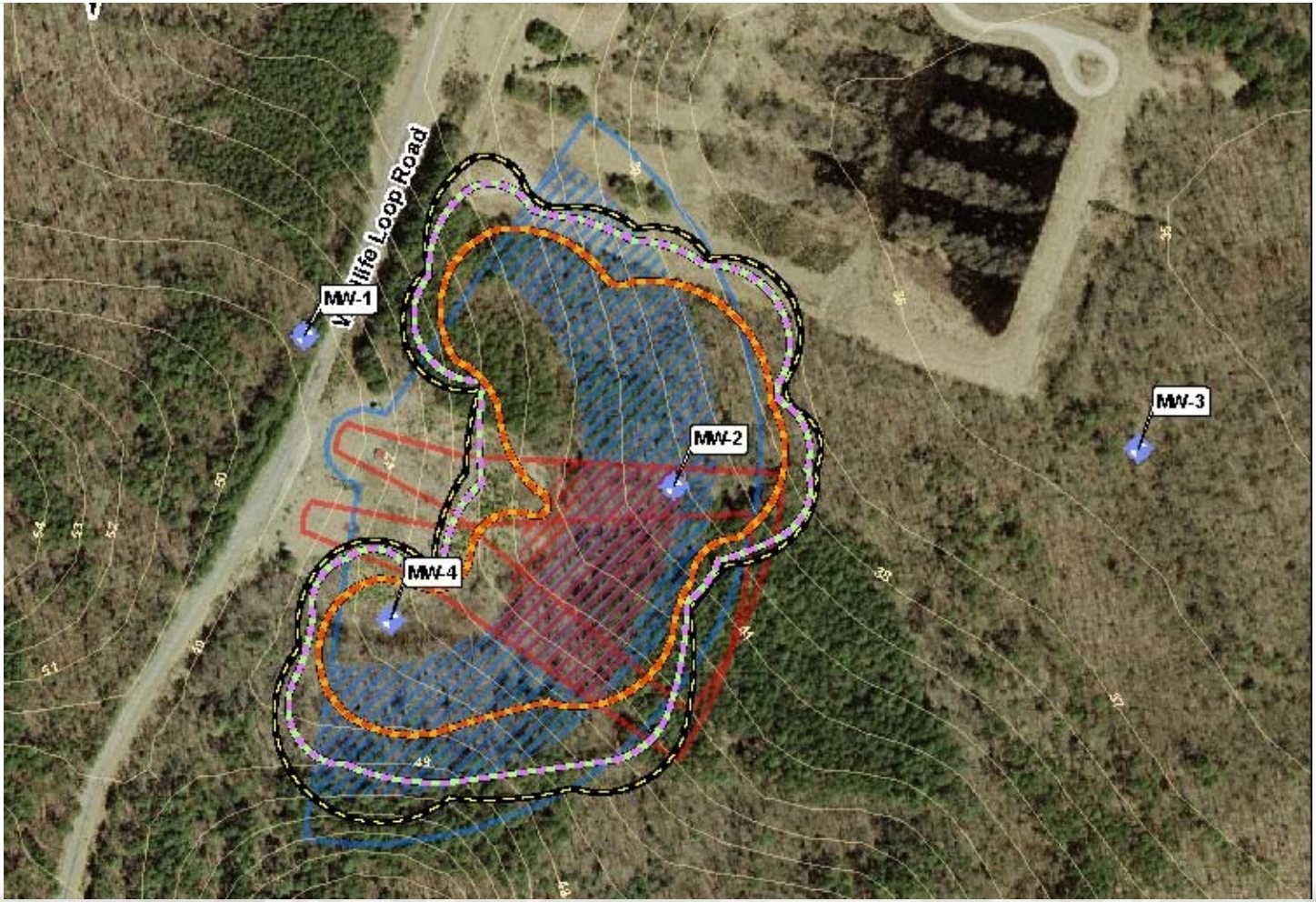
	Soil Concentrations (mg/kg) 0 to 3-Inch Interval			Lead Shot (BBs / ft²)
	Lead	Antimony	Arsenic	
MAX	130,000	2,700	1,900	5,194
MIN	44	0.3	1.6	0
MEAN	5,990	91	56	487
COUNT	116	116	116	108

	Soil Concentrations (mg/kg) 3 to 6-Inch Interval			Lead Shot (BBs / ft²)
	Lead	Antimony	Arsenic	
MAX	6,400	250	39	2,176
MIN	12	0.2	1.4	0
MEAN	602	15	6	98
COUNT	65	65	65	65

	Soil Concentrations (mg/kg) 6 to 9-Inch Interval			Lead Shot (BBs / ft²)
	Lead	Antimony	Arsenic	
MAX	980	23	9	150
MIN	6	0.2	1.2	0
MEAN	170	2	3	35
COUNT	41	41	41	10

	Soil Concentrations (mg/kg) 9 to 12-Inch Interval			Lead Shot (BBs / ft²)
	Lead	Antimony	Arsenic	
MAX	380	6	6	35
MIN	10	0	0	0
MEAN	72	1	3	23
COUNT	24	24	24	3

Groundwater Monitoring Well Locations



Preliminary Results - Groundwater

Field Sample Identification	Sample Date	Dissolved Lead (7439-92-1)						MCL or Action Level (ug/l)	MCL or Action Level Exceeded?
		Result (ug/l)	MDL	LOQ	LF	VF	RC		
MW-2	3/1/10	3.7	0.22	1.0				15	No
MW-2 DUP	3/1/10	2.6	0.22	1.0				15	No
MW-3	3/1/10	1.0	0.22	1.0	U			15	No
MW-4	3/1/10	0.25	0.22	1.0	J			15	No

Field Sample Identification	Sample Date	Dissolved Arsenic (7440-38-2)						MCL or Action Level (ug/l)	MCL or Action Level Exceeded?
		Result	MDL	LOQ	LF	VF	RC		
MW-2	3/1/10	2.0	0.38	2.0	U	UL	o	10	No
MW-2 DUP	3/1/10	2.0	0.38	2.0	U	UL	o	10	No
MW-3	3/1/10	2.0	0.38	2.0	U	UL	o	10	No
MW-4	3/1/10	2.0	0.38	2.0	U	UL	o	10	No

Field Sample Identification	Sample Date	Dissolved Antmony (7440-36-0)						MCL or Action Level (ug/l)	MCL or Action Level Exceeded?
		Result	MDL	LOQ	LF	VF	RC		
MW-2	3/1/10	2.0	0.36	3.0	J			6	No
MW-2 DUP	3/1/10	2.0	0.36	3.0	J			6	No
MW-3	3/1/10	3.0	0.36	3.0	U			6	No
MW-4	3/1/10	3.0	0.36	3.0	U			6	No

MDL: ·d detection limit
LOQ: of quantitation
VF: alidation flag
L: ıate, negative bias
R: rejected
UL: etect, negative bias
LF: lab flag
J:
U:
RC: ason code
m:
o:

Points of Contact

Markus Craig
Program Manager
Office of the Assistant Chief of Staff for Installation Management; BRACD
NC3 - Taylor Building
2530 Crystal Drive # 5064 A
Arlington, VA 22202
Office phone: 703-602-0202
markus.a.craig@us.army.mil

Steve Cardon, CHMM
BRAC Environmental Coordinator
Department of the Army
Directorate of Public Works - Environmental Division
239 Chisholm Ave; Suite 5115
Fort Meade, MD 20755-7068
steve.cardon@us.army.mil